



Factor Theorem - Find a Coefficient Given a Binomial Factor

1 Given that $(x + 1)$ is a factor of $f(x)$, find the value of a .

$$f(x) = x^5 + x^4 - 9x^3 + ax^2$$

A	B	C	D
-9	-8	9	-10

2 $f(x) = x^4 - x^3 + ax^2 + x + 6$

Given that $(x - 1)$ is a factor of $f(x)$, find the value of a .

A	B	C	D
-8	7	-6	-7

3 Given that $(x + 1)$ is a factor of $f(x)$, find the value of a .

$$f(x) = x^3 + x^2 + ax$$

A	B	C	D
1	-1	0	2

4 Given that $(x - 2)$ is a factor of $f(x)$, find the value of a .

$$f(x) = x^3 - x^2 - 4x + a$$

A	B	C	D
3	4	5	-4

5 Given that $(x - 1)$ is a factor of $f(x)$, find the value of a .

$$f(x) = x^3 - 2x^2 - x + a$$

A	B	C	D
2	3	-2	1

6 $f(x) = x^4 + x^3 - 10x^2 + ax + 24$

Given that $(x - 2)$ is a factor of $f(x)$, find the value of a .

A	B	C	D
-3	4	-5	-4

7 $f(x) = x^4 - 2x^3 + ax^2 + 12x + 36$

Given that $(x + 2)$ is a factor of $f(x)$, find the value of a .

A	B	C	D
-10	-12	11	-11

8 Given that $(x - 3)$ is a factor of $f(x)$, find the value of a .

$$f(x) = x^3 - 3x^2 + ax + 3$$

A	B	C	D
-1	-2	1	0